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**TOTAL QUALITY MANAGEMENT:
A REFERENCE GUIDE**

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The concept of Total Quality Management is increasingly discussed in both the private and the public sectors. Reduced staffing and budget levels have made the concept especially attractive to public managers seeking to use resources more efficiently.

Governor Weld's address to the MIT Total Quality Symposium in April 1992 encouraged the interest of Massachusetts officials in TQM. The federal government has had a total quality program in place since 1988. Recognizing the need for state officials to gain knowledge of TQM, the State Library has compiled this reference guide for the TQM process.

The following pages contain summaries of 24 recent articles and one handbook on the TQM philosophy and its implementation. These articles cover the background, application, and critiques of Total Quality Management. Both the private and the public sectors' experiences are covered. There is a detailed subject index to the summaries so that readers can identify which articles cover particular industries or government levels.

While these summaries are comprehensive, the full text of each article included here is on file at the State Library's Reference Desk for further analysis.

We encourage your comments and suggestions on this publication. The Reference Desk can be reached at Tel. (617) 727-2590.

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ARTICLE SUMMARIES

1. "Total Quality Management," State Policy Reports 10, no. 16 (August 1992): 19-22.

Report covers differing opinions on the status of TQM. To some people, the TQM approach remains controversial, while TQM advocates promise the possibility of reduced costs and balanced budgets. The TQM issue was debated at the NCSL meeting in July 1992. NCSL executive directors analyzed the TQM approach in light of the traditional function of legislators: passing bills. Legislators might have to improve several functions: planning and legislative oversight. Among the state quality management enactments are Tennessee's State Government Quality Improvement Act of 1992, and Ohio's bill signed by the Governor implementing recommendations of the business-oriented Operations Improvement Task Force.

2. Bowman, James S. and Barbara J. French. "Quality Improvement in a State Agency Revisited," Public Productivity and Management Review XVI, no. 1 (September 1992): 53-64.

A follow-up review of the quality improvement process at the Florida Power and Light Division of the Florida Department of Transportation (DOT), a winner of the Deming Prize for Quality Improvement. Quality programs generally take five years to reach their maturity, therefore reassessment of the program status is needed. Studies were conducted in the following areas: team building; training; quality of work life; awareness; management; support and commitment; organizational environment; empowerment and resources; efficiency; decision making; quality improvement, etc. Sixty-five percent of the responses agreed that QI was producing positive results. One of the most troubling findings was the lack of trust in DOT, since a trusting environment is integral to the success of TQM. Some of the employees indicated dissatisfaction with leadership and organizational structure, and the authoritarian and non-participative arrangements. DOT employees believe in the quality concepts and philosophy, but they do not perceive that it has yet had a major effect on work produced or efficiency.

3. Brough, Regina Kay. "Total Quality Management in State Government: the Eight Rules for Producing Results," Journal of State Government 4-8.

The repetitive cuts in state funding, and the many shifts of public services from the federal level to the state level pressure the state governments to accomplish more with less. TQM is one approach to consider in producing the necessary results. Citing Federal Express Company as an example of success, the author described the company's six rules of implementing TQM: do

what you say; create a workplace environment that supports TQM; prevent wasteful errors; establish teams to ensure full participation; organize the team on a functional basis, or in the most sensible way, etc. The author added two more rules which are: quality in government service means results; and quality must have explicit measurements of achievement. A chronological overview of the evolution of TQM, with its originators and their individual contributions, offers a background understanding of the TQM movement.

4. Butterfield, Ronald W. "Deming's 14 Points, Applied to Service," Training (March 1991): 50-54, 59.

The 14 points that are considered largely responsible for Japanese industry's post-World War II recovery and rise to dominance in world markets are as follows: create constancy of purpose towards improvement of product and service; adopt a new philosophy; cease dependence on mass inspection; end the practice of awarding business on the basis of price tag; improve constantly the system of production and service; institute on-the-job training; institute leadership; drive out fear; break down departmental barriers; eliminate slogans, instead asking for zero defects and new levels of productivity; eliminate work standards by numerical quotas; substitute leadership for hierarchy; remove barriers that rob workers of their right to pride of workmanship; institute a vigorous program of education and self-improvement; implement company-wide participation to accomplish the transformation.

5. Carr, David K. and Ian D. Littman. Excellence in Government: Total Quality Management in the 1990's. Arlington, VA: Coopers & Lybrand, 1991

This is a workbook by two experienced TQM consultants whose expertise has been used at all levels of public management. The well-captioned chapter layout, the graphics, the comparative tables that contrast the traditional and the TQM style of management, plus the official testimonials from government administrators are convincing evidence that TQM could be made to work. Total involvement of quality management in the environment of changing incumbents and shifting public budgets demands that no one person owns the program. The TQM road to success is presented not as a shortcut but as a long-term cycle of continuous improvement. The authors have provided the necessary homework for public administrators without imposing their personal opinions.

6. Cohen, Steven and Ronald Brand. "Total Quality Management in the U.S. Environmental Protection Agency," Public Productivity & Management Review XIV.1 (Sept. 1990): 99-114.

The director of the EPA's Office of Underground Storage Tanks (OUST) and an office consultant describe their effort to

apply the techniques of continuous quality improvement to regulate underground storage tanks. The purpose is to reduce the number of tanks that are leaking and to get tank leaks cleaned up. Following Deming's 14 points, the OUST prepared a 7-step QI formula capitalizing on the expertise of employees who actually do the work. The OUST also involved the outside world (the organization's suppliers, contractors, and clients) and had them decide what to produce to meet with OUST needs. Quality was defined by the customers. Meetings were conducted with focus groups of distributors, tank owners, tank manufacturers and installers to identify obstacles to implementation of the regulatory requirements. Education of the customers improved the chances of achieving the agency's environmental goals. The ultimate accomplishment was the elimination of wasteful work routines; thus, the organization's resources were conserved.

7. Day, Charles R. "Let's Be Reasonable: the Only Way to Get Total Quality Government is to Demand It," Industry week (4 Nov. 1991): 7.

Having enumerated government ills, the editor asserts that the only way taxpayers will enjoy quality government is to demand it. His challenge to taxpayers: demand decency from incumbents; insist that office-holders focus on issues, not photo opportunities, i.e. honest labor instead of efforts in preparation for re-election; require acceptance of term limits. The mandate extends to industry captains to change their political involvement: quit hedging political bets and defending the status quo for the convenience of lobbying a static population of office-holders.

8. Gabor, Andrea. "The Man Who Changed the World of Quality," International Management (Mar. 1988): 42-46.

W. Edwards Deming, soft-spoken yet demanding, is obsessed with precision, performance and customers. He first became known for his statistical teachings. His principles of management have been accepted by leading Japanese industries since the 1950's, but he remained virtually unknown in the U.S. until a TV documentary, "If Japan can, why can't we?", was aired in 1980. Ford credited Deming for the turnaround of its fortune. Two U.S. corporations, Nashua Corp. and Irving Bank Corp., also adopted Deming's philosophy. Some of Deming's ideas of management sharply diverge from standard business assumptions. Such concepts as merit rating, organization hierarchy and competitive bidding from suppliers are re-evaluated. Commitment by the management as coach and facilitator, teamwork within departments, and the use of statistical quality control methods are among Deming's principles.

9. Gilbert, G. Ronald. "Quality Improvement in a Federal Defense Organization," Public Productivity & Management Review XVI.1 (Sept. 1992): 65-75.

Project Pacer Share, a civil service reform project, features the interface between human resources reform and TQM. The site of the experiment is an Air Force Logistic Command center at the Directorate of Distribution at McLellan Air Force Base in Sacramento, CA. The U.S. Office of Personnel Management took active part in facilitating the change in personnel practices, namely, pay banding, job series consolidation, gainsharing, elimination of performance appraisal, revisions of career/conditional status, and supervisory grade and pay status changes. A senior-level management position for human resources was created and authorized to implement the reform. As a result of the application of TQM, significant improvement in aircraft mission readiness, cost reduction and employee gainsharing have been achieved; however, the project seems incompatible with federal financial practices. As in the cases of TQM at the Florida Power and Light and the Equal Employment Opportunity Commission, Project Pacer Share encountered the same fate for being part of the larger public enterprise. Clearly, the lesson from Pacer Share is that for an organization-wide TQM effort to have lasting effects, it must have strong, consistent and unwavering institutional commitment rather than be dependent upon a few heroic leaders at the top.

10. Herrington, G.M. "The Catch-22 of TQM," Across the Board (Sept. 1991): 53-55.

In TQM, the leadership sets the vision and provides employees with support, tools and rewards for doing their part, namely, taking care of the customer. The Catch-22 is that the senior managers who must personally change their comfortable entrenched culture in order to instill TQ environment may have the most to lose. The conditions that could yield success are: a company's impending financial collapse; demanding customers; or a "born-again" TQM-oriented CEO. Guidelines on successful TQM are in the criteria of the Baldrige Award and the Malcolm Bridge National Quality Award. Leadership activities of successful companies, customer surveys, and ideas from quality experts are also useful resources.

11. Hyde, Albert C. "The Proverbs of Total Quality Management: Recharting the Path to Quality Improvement in the Public Sector," Public Productivity & Management Review XVI. 1 (Sept. 1992): 25-37.

The path to quality improvement in the public sector can be a flexible one, depending on the particular expert or consultant

one chooses to follow, for example, the U.S. Federal Quality Institute handbook, or works by Juran, Crosby, or Deming. In each case, managers learn from the experiences of other organizations, and there are hybrid versions of TQM as well. Historical reversals and revisions on the road to quality management in the private sector are traced. The unique obstacle for state and local governments is that, historically, productivity enhancement and cost reduction tends to be equated with resource reduction. But from the TQM perspective, quality improvement can also be accomplished by increasing the quantity or the timeliness of the services produced or new customers served. TQM will have to address how it will realign budget resource allocations with quality improvement efforts. The implementation process must be subjected to controls in order to know whether TQM is based on proper principle or conflicting, self-rationalizing proverbs. The control system will indicate, too, whether TQM is succeeding or failing and why.

12. Jasper, Herbert N. "Down the Quality Road," Government Executive (Apr. 1992): 37-40, 60.

TQM is a strategic approach to improving performance by changing an organization's culture. Because it embraces many sensible management methods or processes, it is not another fad but a new way of doing business. A conceptual outline for TQM implementation can be described in eight parts: develop a master quality plan, including an organizational vision, statement of values, goals and mission; establish the TQM infrastructure (a quality council, trained advisors and facilitators and instructional materials); define process-action team roles; assign line-manager and staff roles; develop a master training plan; establish a master plan for measurement, including key quality indicators, process improvements, customer/employee attitudes and behaviors; develop a communication strategy and plan; and launch one or more pilot process-improvement projects. Institutionalizing the new methods will help to sustain TQM through changes in political leadership. A list of agencies that provide training and implementation assistance is included in the article.

13. Kline, James J. "Total Quality Management in Local Government," Government Finance Review (Aug. 1992): 7-11.

There are more than 100 local governments in various stages of implementing quality-oriented management processes. Each organization has molded TQM to fit its particular circumstances and needs. Regardless of the structure adopted, each TQM process contains a majority of the following elements: top-level support and commitment; a customer-driven orientation; employee involvement; reward for achievement; training in methods for improving productivity and quality; reducing barriers to improvement; establishing meaningful quality standards and measures; written vision or mission statements directly linked to team-established targets or goals. A chart of TQM administrative stages and its

management tools maps out the plan-do-check-act cycle of continual improvement. A second chart shows a sample infrastructure used in a local government, including a quality council, lead teams and operational teams. Team coordination and incremental changes linked to a continual improvement process are often more practical than the traditional approach of managing and massive changes. The TQM experiences in Madison, Wisconsin, Phoenix, Arizona, Fort Collins, Colorado, and Fort Lauderdale, Florida, exemplify some TQM accomplishments and barriers. The conclusion is that an increasing number of local governments are finding that TQM provides them with a proactive way to deal with problems.

14. Koska, Mary T. "Adopting Deming's Quality Improvement Ideas: a Case Study," Quality Watch: Hospitals (5 July 1990): 58-69.

This case study demonstrates that Deming's industrial quality improvement system is applicable in a hospital setting. Through data collection and analysis, institutional process-based problems are uncovered. System errors rather than employee errors are to be addressed first. Simple quality improvement steps include: an improved operating room scheduling method that makes it possible for surgery to start on time; medication change orders were implemented more rapidly when the pharmacy shortened the interval between filling the medicine cart and actual delivery to patient rooms. Inadequate education in the TQM process for managers and employees, as well as lack of patience with the process are among the pitfalls encountered. Furthermore, the author notes that TQM is not for every occasion without closely examining priorities.

15. Massey, Karlan. "A Healthy Comeback," Government Executive (May 1992): 40-41.

The Division of Federal Occupational Health (FOH), created through the Federal Employees' Compensation Act, is authorized to set up health and safety programs if federal agencies consult with the Public Health Service. For a long time, the FOH's focus was its health units that provided both first aid and preventive clinical services such as blood-pressure and cholesterol screening. In 1985, federal budget and personnel cuts forced FOH to re-examine its mission. The director wants his staff to work one-on-one with federal managers to offer solutions to problems and help set up appropriate preventive and corrective measures for individual agencies. Using an entrepreneurial approach and vision, the services FOH offers now include: employee assistance, substance abuse and weight loss counseling; fitness centers, stress management and healthy back seminars; environmental monitoring, etc. The reimbursements from these agencies for the FOH services go to pay consultants and to hire contractors to administer various health programs and centers. FOH central office is in Rockville, Md. and there are ten regional headquarters, including one in Boston. "The FOH is not only a resource

for federal managers concerned with their employees' health; it is also an example of total quality management in action," says the director.

16. McKenna, Joseph F. "TQ Government," Industry Week (4 Nov. 1991): 13-19.

The author maintains that TQM in government can eliminate waste, save costs and enhance efficiency. Numerous government agencies have adopted TQM. For instance, using TQM the U.S. Internal Revenue Service was able to send refunds in 2 weeks rather than 8 weeks. A transformation triad is quoted, briefly: the transformation of functional managers into process managers; evolution of the workforce into an empowered team; and the use of statistical process control to analyze and improve the processes.

17. Milakovich, Michael E. "Enhancing the Quality and Productivity of State and Local Government," National Civic Review 79.3 (1 May 1990): 266-276.

The article traced the development of a statistical quality control method since its beginning in the United States in the 1920's. TQM can have profoundly positive effects in public services when Deming's overall quality management approach is adopted. Referring to Deming's 14-point concepts, the author comments on how and why the usual management philosophy has misguided the government. The six deadly "diseases" (emphasis on short-term thinking, lack of constancy of purpose, etc.) from which all levels of government suffer, and the seven obstacles (fear of change, annual budgeting, etc.) to achieving quality as enumerated in the article have convincingly dispelled some of the long held management myths. This article provides an overall orientation to TQM and introduces new ways to efficient public services.

18. Patten, Thomas H., Jr. "Beyond Systems--the Politics of Managing in a TQM Environment," National Productivity Review (Dec. 1991): 9-19.

Managing in a TQM environment demands interpersonal skills and new learning. A list of 24 key steps that lead to successful implementation of TQM heads the discussion. It begins with defining internal and external customer requirements from the company, planning for quality improvement with each customer, and concludes with building continuous improvement techniques and ideas into everyday management as a way of life. Various types of personnel behaviors that obstruct the TQM process are realistically described; however, detailed rationales as to how and why to overcome the personnel barriers with skills and new learning encourage the implementation of TQM.

19. Penzer, Erika. "Making a Federal Case for Quality," Incentive (Aug. 1991): 29-30, 107.

The potential savings from TQM in the public sector is staggering. "Quality experts estimate that between 17 and 35 percent of all work needs to be redone," say Newt Gingrich (R-Ga.). Estimates Don Ritter (R-Pa.), "If the cost of 'poor quality' is somewhere between 20 and 40 percent,...we would save \$256 billion..." But government agencies face a tangle of laws and outdated policies that block TQM's ultimate success. The agencies that claim cost savings and efficiency gains are punished with automatic budget and staff cuts rather than rewarded to reinvest. The lack of government incentives is further illustrated in several efficient implementations of TQM (IRS, NASA, McClellan Air Force Base, and the Sacramento Air Logistics Center). Legislative action is needed to revamp the public recognition and reward policies. Education of taxpayers on the link between TQM and the service they receive from government agencies should send a message to the Congress to support quality management. Every citizen has the duty of demanding what she/he deserves and settling for nothing less than quality service from the government.

20. Penzer, Erika. "A Philadelphia Story: Will a New Focus on Quality Turn Around an Ailing Government Agency?" Incentive (July 1991): 34-36.

TQM at the Philadelphia center of the Department of Veterans Affairs distinguished itself in several ways. In the past, VA staff were trying to get the customer to bend to their ways. The end products delivered, even though timely and meeting VA standards, were different from what the customers needed. The Paperwork Reduction Act of 1980 restricted the use of surveys, but VA sought veterans' feedback of its quality efforts by polling both by phone and walk-in interviews. Currently, there are 40 teams working on problems assigned by management. Cross-functional teams resolved problems jointly, and they made employees aware how their work was related to that of others. The cost of many in-house training sessions involved only employees' time away from their jobs. The extra resources derived from implementing TQM were redirected as investments in other areas. To quote the leaders at the center, "Either we keep up or we get eaten up. We can bury our heads in the sand, or we can bend to the needs of those people who depend on us. It's a do-or-die situation--we have to improve".

21. Reed, Carson. "The Big Q: Integrated Quality Management," Colorado Business Magazine (Mar. 1991): 14-16, 21-24, 50-52.

Quality management is analogous to the process of pumping up a punctured inner tube on a bicycle. When the invisible (the tiny hole) is not made visible, efforts to repair the situation turn to waste. Tracking down the system's problems through data

analysis is the first step to a solution. The CEO's must then act on the information, integrating the quality method, building in the infrastructure that assures employees that the defective processes they have uncovered will be corrected. "Big Q" enlarges the concept of management to include product and service, manufacturing process and business process, external customer and the internal customer (i.e. the employee). The success stories of US West, Xerox Co., Federal Express Corp. and CU Family Health Center conclude the article.

22. Shoop, Tom. "Can Quality be Total?" Government Executive (Mar. 1990): 20-25.

After its initial success in several federal agencies, TQM gradually became official federal government policy. A 1988 Presidential Executive Order called for "a government-wide program to improve the quality, timeliness, and efficiency of services provided by the federal government." In the same year, the Federal Quality Institute was established under the Office of Personnel Management. But for TQM to succeed, two major roadblocks must be overcome: cost and executive commitment. Agency-wide training of managers and employees, traveling expenses to bring people together for the training, and subsequent testing and measurement take time and money. Commitment from the top remains mixed. First, many executives do not admit that there are problems. In some cases, the TQM effort will be successful only when the bureaucrat thinks his position is threatened. And there are people in the government who do not think the function of their business is quality. Some might think certain quality could be achieved at certain cost, but not total quality at any cost. Lastly, there are others who protest the need to change.

23. Shoop, Tom. "Uphill Climb to Quality," Government Executive (Mar. 1991): 17-19.

Here are examples of both success and failure in TQM's implementation in government. Many of the Defense Department's manufacturing-related operations were the first to benefit from TQM. TQM has proven successful in some service operations as well. One Internal Revenue Service unit reduced interest paid to the taxpayers because of better processing of returns. At the Veterans Affairs Medical Center in Kansas City, the mortality rate dropped after TQM was launched. Nevertheless, the quality crusade has sputtered at various agencies. At the Equal Employment Opportunity Commission, TQM came to a halt because the then-EEOC chairman lost interest in it. The Social Security Administration tried to start TQM, faltered and had to start over. Apparently, the then-SSA commissioner didn't really understand what TQM was. TQM in government is voluntary and top executives are hesitant to bring the expense and pain on themselves. The front-line workers welcome TQM to free them from excessive supervision and to allow them to do the job easier and

quicker. Middle management tends to frustrate the process because TQM advocates the elimination of redundant management. Lack of flexibility in government operations as compared to private corporations and a lack of motivation in government settings when agency survival is rarely at risk are also inhibiting factors.

24. State Reorganization Commission. Total Quality Management: Implications for South Carolina State Government. 1991.

The history and concepts of TQM were introduced. The main theme was on the development and implementation of the quality process in organizations. Communication, coordination, leadership, worker participation and customer satisfaction all play crucial roles in the success of total quality management. Statistical measurements of services and products are problem solving tools. Examples of government TQM are described, including extensive study of the South Carolina experience.

25. Walters, Jonathan. "The Cult of Total Quality," Governing (May 1992): 38-42.

Total quality management is winning converts in state and local government, like a cult having its special vocabulary and dedicated true believers. There have been some top-to-bottom efforts, but the more common case is for TQM to sprout out from the top of a single division or office. Those who have put TQM into practice generally recommend starting small. TQM projects with specific goals, such as reducing trash collectors' injuries, or efficient deployment of a limited police force to control crimes, are described. In some cases, TQM can be seen as a way to help stave off privatization efforts by making the public sector more competitive. Both management and labor of Milwaukee County's fleet maintenance department credited TQM for its rescue from a privatization plan. Identification of customers of government services, statistical measurements of the intangible, etc. demand modification of some of the major principles of TQM. Whether TQM in government will ever make the transition from cult status to widespread acceptance might yet be seen, but the article ends with an optimistic note that once TQM takes root in the rank and file it is more likely to stay.

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